

Vocabulary Matters

Kerry Stephenson
KCTE/LA 2012
Lexington, Kentucky

Activities:

Four-Fold Vocabulary

Word Map

Pictures

List/Group/Label (choose reading passage based on students)

Technology/Websites

Vocabulary Background/Research

According to the National Reading Panel (2000):

- Vocabulary should be taught both Directly and Indirectly.
 - Directly:
 - Teaching specific words (pre-teaching)
 - Teaching analysis of root words and affixes
 - Indirectly:
 - Exposing students to new words
 - Eyes on text
 - Connections to Background Knowledge
-

Technology and Vocabulary:

Technology can be effective for vocabulary instruction, but it should not take the place of vocabulary instruction.


Whether or not you use technology to teach vocabulary, these four elements are critical:

- Wide reading
- Teaching individual words
- Teaching word learning strategies
- Fostering word consciousness

4-Fold Vocabulary

In this activity, students fold their papers into rows of 4 sections each. The number of row can relate to the number of words to be studied. In the first section, the student writes the word. In the 2nd section, the student writes a definition of the word in their own words. In the 3rd section, the student draws a picture or symbol to represent the word. In the 4th section, the student writes a sentence with the word based on their definition.

After completing the page, the students cut apart the sections and put them in an envelope. The words are review by having student reassemble the word rows. Students can trade rows/envelopes with others.

| Word | Definition | Picture | Sentence |
|------|---|---|-------------------------------|
| Oven | kitchen appliance used for baking or roasting |  | We baked cookies in the oven. |



Carrollton-Farmers Branch ISD – Social Studies

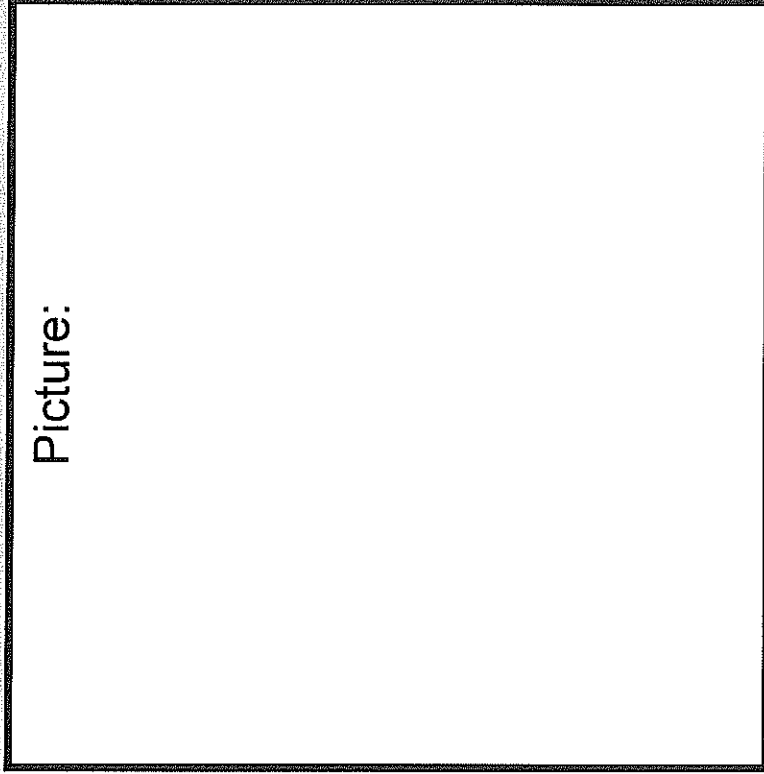
Word:

In my own words:



_____ is the same.

_____ is the
opposite.

Picture:



List-Group-Label Activity

1. Go to <http://www.justreadnow.com/strategies/list.htm> and read about the List-Group-Label Strategy. This is a very simple, very useful strategy to help students predict how the words they are about to read fit together.
2. Print out the handout entitled Listgrouplabelpractice.doc 
3. Cut the words apart and put them in groups of at least three with a label. 
4. Read the article found at <http://skydiary.com/kids/tornadoes.html> (or the PDF found on Blackboard)
5. Consider what you were thinking as you read:
 - Did you look for the words you had seen?
 - Did you change any groupings?
 - Did you move words to different groups?
 - How was the way you read and reacted to the passage determined by your work with the words?
6. For what topics in your curriculum could you use this strategy?

| | | | |
|--------------|--------------|-----------------|---------------|
| atmosphere | air masses | supercell | mesocyclone |
| spawn | updraft | circulations | wall cloud |
| hailstones | rain shaft | particles | funnel |
| hemisphere | cyclonically | waterspout | cumulus |
| Fujita scale | tornado | forewarned | radar |
| forecasts | equalize | tornado warning | tornado watch |
| prediction | debris | mammatus | virga |
| anvil | uprooted | disintegrate | |

Chris Kridler's SKY DIARY

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- help
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KIDSTORM

facts about TORNADOES • LIGHTNING • HURRICANES • STORM CHASING

tornadoes

TOPICS: [what causes a tornado?](#) | [measuring tornadoes](#) | [tornado safety](#) | [what if you're in your car?](#) | [tornado links](#)

What causes a tornado?

A tornado isn't likely to take you to Munchkinland, as it did in "The Wizard of Oz," but a strong one can destroy buildings and create a damage path a mile wide. Its wind speeds can top 300 miles per hour.

Tornadoes occur just about everywhere in the world, from India to Australia, and all over the United States, but the most famous and active breeding ground for tornadoes is Tornado Alley. It extends from Texas up through Oklahoma, Kansas and Nebraska to the Dakotas. Warm, moist air from the Gulf of Mexico clashes with cold air from the north and fuels storms that form there. Tornadoes can form any time of year, but many occur in the stormy spring, when these warm and cold air masses collide. Storms often are triggered where two different kinds of air masses meet, such as dry and moist air masses, or cold and warm air masses.

We don't know all the reasons a tornado forms, but scientists have a general idea of the weather ingredients that need to come together.

Tornadoes can form out of many kinds of storms, but the type most likely to produce tornadoes is the **supercell**. A supercell has an area of rotation within the storm called a **mesocyclone** that can spawn a tornado. The storm itself can rotate when winds at different levels of the atmosphere come from different directions. If the winds are lined up just right, with just enough strength, the storm turns like a top. Air circulations within the storm combined with a strong updraft contribute to tornado formation.

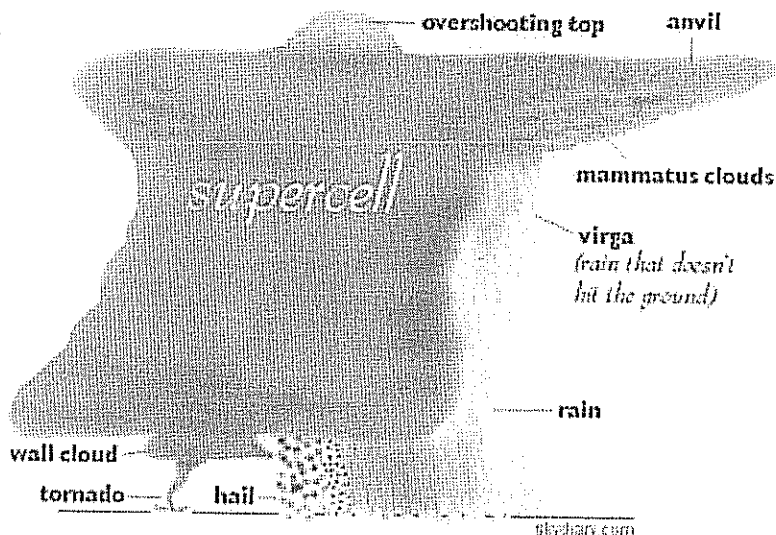
Under the rain-free base of a supercell, look for a wall cloud to form. Out of this lowered area is where you are likely to see a tornado. But if you ever find yourself near a storm like this, watch out. Quick tornadoes can form out of other parts of the storm, too.

Big **hail** is another danger posed by supercells and other storms. You may notice what looks like a rain shaft that is very, very white falling from a storm. You may be looking at hail falling. Because hail is made of ice and is usually white, it reflects more light and can look bright as it falls. Big hail can batter cars, damage homes and injure people and animals. Hail consists of particles that gather layers of water that freeze into ice as the hailstones are cycled multiple times through a storm's updraft. You are likely to see several layers of ice if you cut open a grapefruit-size hailstone. Just don't get bonked in the head by one.



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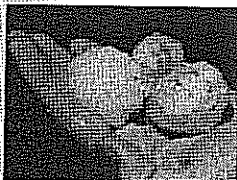
This was the dying stage, or rope stage, of a tornado that occurred May 16, 2000, near Guernsey, Wyoming. (Photo copyright 2000 by Chris Kridler / skydiary.com)



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Hail! (Image from video; copyright 1999 by Chris Kridler / skydiary.com)

A **tornado** is only a tornado if it's in contact with the ground. Otherwise, it's a **funnel**. Some tornadoes don't have a visible funnel, but if debris is visible at the ground, it is considered a tornado. Because big storms can suck up dust or kick up dust even when there's no tornado, sometimes they can be confusing to observers. If there is rotation in the cloud above the dust, then it may very well be a tornado.

Most tornadoes last only 5 or 10 minutes, but some have been known to last more than an hour. Close to 1,000 tornadoes are reported every year in the United States. Most, but not all, tornadoes in the northern hemisphere spin counter-clockwise, or cyclonically. In the southern hemisphere - for instance, Australia - the opposite is true.

Another type of tornado is a waterspout - a tornado over water. Waterspouts form out of quickly growing cumulus (puffy) clouds or storms. They are sometimes weaker than their land cousins, but they can still cause damage or flip boats. A dust devil, however, is not a tornado. If it's a warm day, and light winds at the surface cooperate, you may see one of these whirling columns of dust in a farm field, a parking lot or the desert.

Measuring tornadoes

Though we can look at a tornado and see how big it is, we can't measure its strength by sight. Instead, scientists often use the F-scale, or **Fujita scale**, to measure how strong tornadoes are.

The theoretical scale conceived by the late Dr. Ted Fujita of the University of Chicago would have gone up to F12 - but anything above F5 was considered impossible. That is why the scale only goes up to 5.

| The Fujita Scale | |
|---|---|
| F0 gale tornado 40-72 mph | Some damage to chimneys; breaks branches off trees; pushes over shallow-rooted trees; damages sign boards. |
| F1 moderate tornado 73-112 mph | Lower limit is the beginning of hurricane-force winds. Peels surface off roofs; mobile homes pushed over; moving autos pushed off roads. |
| F2 significant tornado 113-157 mph | Roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light-object missiles generated. |
| F3 severe tornado 158-206 mph | Severe damage. Roofs and some walls torn off well-constructed homes; trains overturned; most trees in forest uprooted; heavy cars lifted off the ground and thrown. |
| F4 devastating tornado 207-260 mph | Well-constructed homes leveled; structures with weak foundations blown off some distance; cars thrown and large missiles generated. |
| F5 incredible tornado 261-318 mph | Phenomenal damage. Strong frame homes disintegrate or lifted off foundations and carried considerable distance; trees debarked. |

The scale is a decent guideline to help us classify tornadoes, but it isn't always useful. Because ratings on the scale are determined by damage to structures, a tornado that rips through a field will not get much of a rating, no matter how big it is.

It is likely that the strongest tornadoes, such as the F5 that hit the Oklahoma City area on May 3, 1999,



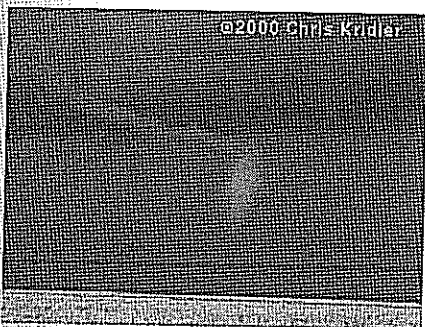
The same storm that spawned the Oklahoma tornado pictured near the bottom of the page also spawned an F3 tornado that did serious damage to homes in Lamont, Oklahoma. It even drove this sheet metal into a tree trunk. (Photo copyright 1999 by Chris Kridler / skydiary.com)

sometimes exceed the top speed in the scale. But until we come up with a new scale or more accurate and consistent measurements, the Fujita scale is the most convenient way to measure the strength of tornadoes.

Only about 1 percent of all tornadoes fall into the most violent categories - F4 or F5. But even a weak tornado can turn over your car or damage a mobile home. That's why it's important to seek shelter in a sturdy structure when a tornado is approaching.

Tornado safety

Have you heard the expression "forewarned is forearmed"? It means that if you know what's coming, you can prepare yourself for it. The best way to know if a tornado is coming is to listen to radio and television reports of tornado watches and warnings.



Is this strange cloud a tornado? A few minutes before this photo was taken on May 20, 1999, in the Texas panhandle, the funnel was touching the ground and, therefore, was a tornado. Here, it's just a funnel. A funnel cloud becomes a tornado only when it touches the ground. (Image from video; copyright 1999 by Chris Kridler / skydiary.com)

The best source of all is NOAA Weather Radio, which broadcasts continuous National Weather Service forecasts and, if there is severe weather, warnings. A good NOAA Weather Radio has an alert feature that will go off like an alarm clock whenever a warning is issued. You can get these radios at many big retail stores or at specialty stores, such as Radio Shack or Oregon Scientific online. (NOAA stands for National Oceanic and Atmospheric Administration.)

If a **tornado watch** is issued for your area, that means conditions are favorable for the formation of tornadoes. If a **tornado warning** is issued, that means that a tornado has been spotted or that radar is showing a possible tornado forming in a storm. Take the warning seriously! Don't bother to open windows to "equalize the pressure." That's a harmful myth that will lead to a bunch of rain and wind in your house.

Find shelter immediately on the lowest floor of your home in an interior room. Basements or cellars are best, but if you don't have

one, go to a closet or a bathroom, a small room without windows. If you can, cover yourself up with blankets or a mattress. Also try to take your radio with you so you can hear where the storm is and if the danger is over. In public buildings, try to find a sheltered area away from windows. A small room is best. If you're in a trailer home, get out and try to find a solidly built building or tornado shelter to hide in.

The chance of a tornado hitting you is very small, but you have to act fast if you hear a warning. You may have only a few minutes to find shelter. It's a good idea for your family to have a practice tornado drill once a year so you know exactly what to do.

What if you're in your car?

It's hard to know what to do if you hear a tornado warning and you are in your car. The best thing to do is try to find solid shelter, such as a well-built building. Park your car off the road so that traffic can get through, and get inside the shelter.

Do not stand outside and look at the tornado. They can move quickly toward you, and lightning is a danger, too. It's also dangerous to stay in your car if a tornado is close to you. It will offer you no protection. Again, look for solid shelter.

It is also dangerous to hide under a highway overpass. A famous video of a tornado made a lot of people think that was a safe thing to do, but most overpasses will not offer you protection. The people in the video were not hit directly by the tornado. In fact, debris hurtling at 200 or 300 miles per hour could hit you while you are under the bridge, or a tornado could blow you out! Tragic deaths occurred in the May 3, 1999, tornadoes around Oklahoma City because people tried to hide under overpasses. In addition, when everyone parks under an overpass, traffic is blocked, leaving some people helpless and stuck in their cars in the path of a tornado.

Common advice is to get into a ditch and cover your head. If that is all that is available to you, then do it. If you have no shelter, the excellent [Storm Prediction Center tornado safety tips](#) suggest lying flat, face-down in a low area and away from cars and trees, which a tornado could throw on top of you. Nonetheless, a ditch offers little protection. If the tornado is still far away, it is better to drive away at right angles to the tornado's motion, if traffic allows, and find shelter in a building if you can.

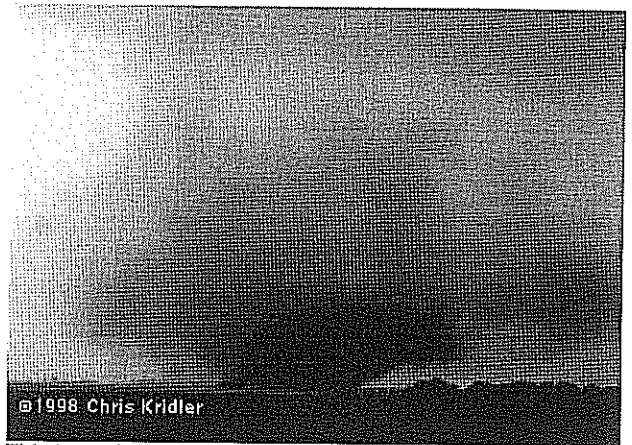
If a tornado looks as if it's standing still and just getting bigger, it's probably headed right for you. You have to get out of its way. There's no arguing with a tornado.

This all probably sounds pretty scary, but don't worry too much. Tornadoes are rare events. Just keep your wits about you and always look for solid shelter if you hear a tornado warning or see one coming. Some storm chasers actually carry helmets with them, just in case. It may look silly, but it's a really good idea!



Learn more about tornadoes at these sites:

- [Tornado Project Online](#)
- [Tornado Safety/Federal Emergency Management Agency](#)
- [Tornadoes: Frequently Asked Questions/Storm Prediction Center](#)
- [Tornado photo album/National Severe Storms Laboratory](#)
- [Tornado research/National Severe Storms Laboratory](#)
- [Tornado questions and answers/National Severe Storms Laboratory](#)
- [VORTEX: Unraveling the Secrets/National Severe Storms Laboratory](#)
- [Fujita Scale/Storm Prediction Center](#)
- [Online Tornado Museum](#)



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This tornado occurred on May 24, 1998, near Medford, Oklahoma. (Photo copyright 1998 by Chris Kridler / skydiary.com)

[TORNADOES](#) | [LIGHTNING](#) | [HURRICANES](#) | [STORM CHASING](#) | [KIDSTORM HOME](#)

Vocabulary Websites and Resources

www.readwritethink.com – Many interactive word sorts, including word families and short vowels. Also has concept sorts, when teaching a concept. These could be used individually by students or on your SmartBoard/Eno Board.

www.starfall.com – Many interactive activities. Students could do at school OR at home.

www.luminosity.com – Many interactive vocabulary websites.

www.readinga-z.com – Interactive and printable resources. Membership needed (but you can get a free trial membership).

www.literacyconnections.com – Ideas, strategies, and templates.

www.justreadnow.com – Many resources and strategies.

www.jc-schools.net/tutorials/vocab/ppt-vocab.html - Not really tutorials, but templates and ready-made game by grade and subject area.

Using Pictures for Vocabulary

Whether or not you use technology (i.e. Power Point) to introduce vocabulary, pictures are always a good thing. The visual helps students to remember the word and helps them connect it to background knowledge.

One of my favorite ways to use pictures is through a literacy center. Have pictures and words – the students match up the correct word with the picture, and then can check answers with a partner.

However you do it, use pictures to reinforce the background knowledge and to help students remember it. Introducing vocabulary with a Power Point (or other) presentation showing pictures and words is always great. Give students freedom to talk about the pictures, as this will only reinforce background knowledge, helping the students learn the words.